

Notice of Allowability	Application No.	Applicant(s)	
	09/847,011	MATSUMOTO, YUKINORI	
	Examiner	Art Unit	
	Wes Tucker	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 1-10-05.
2. ☒ The allowed claim(s) is/are 1-8,10,13-20,22,25-32,34,39,43-51,55-57 and 59-64.
3. ☒ The drawings filed on 10 January 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
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DETAILED ACTION

Response to Amendment

1. Applicant's response to the last Office Action, filed January 10th 2005 has been entered and made of record.
2. Applicant has amended Claims 1-5, 7, 10, 13-20, 22, 25-32, 34, 39, 43-49, 55-57 and 59-64. Applicant has cancelled claims 9, 11, 12, 21, 23, 24, 33, 35-38, 40-42, 52-54, and 65-69. Claims 1-8, 10, 13-20, 22, 25-32, 34, 39, 43-51, 55-57, 59-64 are pending.
3. Applicant has elected, without traverse, Claims 1-10, 13-22, 25-34, 38-69 in accordance with the Examiner's restriction in the last office action. Applicant has cancelled claims 11, 12, 23, 24 and 35-37 without prejudice.

Objections to the Specification

4. Applicant has amended the specification in accordance with Examiner's objections in the previous office action. All objections made to the specification are therefore withdrawn.

Objections to the Drawings

5. Objections to the drawings are withdrawn in view of the newly submitted corrections and replacement sheets.

Objections to the Claims

6. Objections to the claims

Claim Rejections

7. Applicant's arguments have been fully considered and are found to be persuasive in view of the newly amended independent claims.

Allowable Subject Matter

8. Claims 1-8, 10, 13-20, 22, 25-32, 34, 39, 43-51, 55-57, 59-64 are allowed.
9. The following is an examiner's statement of reasons for allowance:
10. With regard to the newly amended independent claims 1-4, 13-16 and 25-28, Applicant has added limitations including subject matter taken primarily from canceled dependent claims 9 and 40-42. The newly added limitations include the determining of a final object surface location selected from a plurality of object surface locations and based on matching coded light patterns from first and second images captured from first and second image capture devices.
11. The feature of determining a final object surface location from a plurality of surface locations is addressed in the previous office action as noted by the Applicant with the 103 combination of the references to Niem and Battle and further in view of the

reference to Wojciech. Wojciech discloses image-based visual-hulls wherein several silhouette images are used in combination with each other to determine the shapes of objects by volume “carving” out the three-dimensional shape thus interpreted as determining a final object surface from a plurality of possible surfaces.

12. The feature of matching a coded light pattern on the first image with a second light pattern on the second image was rejected under the 103 combination of Niem and Battle in the previous office action in regard to claims 40-42. Niem and Battle disclose using coded light to match patterns in two different acquired images and the combination of the two references teaches recovering 3D object dimensions.

13. In the newly amended independent claims the final object surface location determined from a plurality of surface locations is determined based on the matching light patterns. The combination of Niem, Battle and Wojciech does not teach or fairly suggest finding a final object surface location determined from a plurality of surface locations based on the matching light patterns. The process of Wojciech does not use coded light patterns to “carve” out 3D shapes and therefore it cannot be used to teach or fairly suggest determining the final object surface based on the matching of coded light patterns. None of the other prior art found teaches or fairly suggests such a method.

Conclusion

14. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

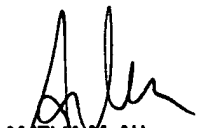
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wes Tucker whose telephone number is (571)272-7427. The examiner can normally be reached on 9:00am - 5:30pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (571)272-7414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wes Tucker

6-7-05


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